

10 Rec'd PCT/PTO 20 DEC 2004

WO 2004/001354 A1



For two-letter codes and other abbreviations, refer to the "Guidance Notes on Codes and Abbreviations" appearing at the beginning of each regular issue of the PCT Gazette.

INTERNATIONAL SEARCH REPORT

Internatio Application No
PCT/ 03/02434

A. CLASSIFICATION OF SUBJECT MATTER
IPC 7 G01J9/00 H01L27/146 H01L31/113

According to International Patent Classification (IPC) or to both national classification and IPC

B. FIELDS SEARCHED

Minimum documentation searched (classification system followed by classification symbols)
IPC 7 H01L G01J

Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched

Electronic data base consulted during the International search (name of data base and, where practical, search terms used)

EPO-Internal, WPI Data, PAJ, INSPEC

C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category *	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X	US 3 714 522 A (TARUI Y ET AL) 30 January 1973 (1973-01-30) figures 7-9 column 7, line 42 - column 9, line 8 column 11, line 17 - line 59 column 12, paragraph 1	1, 2, 10
Y	--- LANGE R ET AL: "SOLID-STATE TIME-OF-FLIGHT RANGE CAMERA" IEEE JOURNAL OF QUANTUM ELECTRONICS, IEEE INC. NEW YORK, US, vol. 37, no. 3, March 2001 (2001-03), pages 390-397, XP001086832 ISSN: 0018-9197 figure 3 Section IV A: Pixel concept --- -/--	1, 15-22

☒ Further documents are listed in the continuation of box C.

☒ Patent family members are listed in annex.

* Special categories of cited documents :

- *A* document defining the general state of the art which is not considered to be of particular relevance
- *E* earlier document but published on or after the international filing date
- *L* document which may throw doubts on priority claim(s) or which is cited to establish the publication date of another citation or other special reason (as specified)
- *O* document referring to an oral disclosure, use, exhibition or other means
- *P* document published prior to the international filing date but later than the priority date claimed

- *T* later document published after the international filing date or priority date and not in conflict with the application but cited to understand the principle or theory underlying the invention
- *X* document of particular relevance; the claimed invention cannot be considered novel or cannot be considered to involve an inventive step when the document is taken alone
- *Y* document of particular relevance; the claimed invention cannot be considered to involve an inventive step when the document is combined with one or more other such documents, such combination being obvious to a person skilled in the art.
- *G* document member of the same patent family

Date of the actual completion of the international search

31 October 2003

Date of mailing of the international search report

06/11/2003

Name and mailing address of the ISA

European Patent Office, P.B. 5818 Patentlaan 2
NL - 2280 HV Rijswijk
Tel. (+31-70) 340-2040, Tx. 31 651 epo nl,
Fax: (+31-70) 340-3016

Authorized officer

Visscher, E .

INTERNATIONAL SEARCH REPORT

Internatio application No
PCT/ 3/02434

C.(Continuation) DOCUMENTS CONSIDERED TO BE RELEVANT

Category °	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
Y	PATENT ABSTRACTS OF JAPAN vol. 006, no. 238 (E-144), 26 November 1982 (1982-11-26) -& JP 57 136870 A (FUJITSU KK), 24 August 1982 (1982-08-24) abstract; figure 3	1, 15-22
A	DE 198 21 974 A (SCHWARTE RUDOLF) 25 November 1999 (1999-11-25) cited in the application figures 3,5,7,10	15,19,22
A	EP 0 435 509 A (GEN ELECTRIC) 3 July 1991 (1991-07-03) figures 15-17 column 15, line 25 -column 16, line 34	1
A	US 5 528 643 A (HYNECEK JAROSLAV) 18 June 1996 (1996-06-18) cited in the application figures 1,2 column 3, line 51 -column 5, line 44	1

INTERNATIONAL SEARCH REPORT

Information on patent family members

International application No
PCT/03/02434

Patent document cited in search report		Publication date	Patent family member(s)	Publication date
US 3714522	A	30-01-1973	JP 51020870 B JP 50021078 B	28-06-1976 19-07-1975
JP 57136870	A	24-08-1982	NONE	
DE 19821974	A	25-11-1999	DE 19821974 A1 AU 5025599 A BR 9910523 A CN 1301401 T WO 9960629 A1 EP 1080500 A1 JP 2002516490 T	25-11-1999 06-12-1999 16-01-2001 27-06-2001 25-11-1999 07-03-2001 04-06-2002
EP 0435509	A	03-07-1991	CN 1052974 A EP 0435509 A2 JP 4127583 A	10-07-1991 03-07-1991 28-04-1992
US 5528643	A	18-06-1996	US 5652622 A US 5369039 A US 5182623 A JP 3220770 A	29-07-1997 29-11-1994 26-01-1993 27-09-1991